

CLAIMS

1. A connector shell for a multiple wire cable assembly (14) having multiple ground conductors and signal conductors, the connector shell comprising:
  - a housing (18) having a ground potential,
  - a multitude of contact elements (46) arranged in a longitudinal array (44), the contact elements (46) being provided for making electrical contact to contact elements of a mating connector and comprising:
    - (i) grounding contact elements (40) for connecting to the ground conductors of cables (26) of the multiple wire cable assembly (14) and
    - (ii) signal contact elements (42) for connecting to the signal conductors of the cables (16) of multiple wire cable assembly (14),
  - a longitudinal grounding plate (24) extending along and in the longitudinal direction of the array (44) of the contact elements (46), the grounding plate (24) having two lateral edges (28) at least one of which is provided for electrical connection to the ground potential of the housing (18),
  - wherein the grounding plate (24) comprises throughholes (62) having the grounding contact elements (40) extending therethrough,
  - wherein at the throughholes (62) the grounding contact elements (40) are electrically connected to the grounding plate (24) and frictionally engage within the throughholes (62), and
  - wherein the grounding contact elements (40) are capable for connecting directly to the ground conductors of the cables (16) or directly to terminal connector (54) of the cables (16).
2. The connector shell according to claim 1, wherein the grounding plate (24) has at least one cut-out section (60) having the signal contact elements (42) extending therethrough without contacting the grounding plate (24).

3. The connector shell according to claim 1, wherein the grounding plate (24) has several cut-out sections (60) and wherein each of the cut-out sections (60) has at least one signal contact element (42) extending therethrough without contacting the grounding plate (24).
4. The connector shell according to claim 3, wherein the cut-out sections (60) are designed as throughholes in the grounding plate (24) and wherein each of these throughholes has a signal contact element (42) extending therethrough with the signal contact element (42) being electrically insulated from an edge of the respective throughhole.
5. The connector shell according to any one of claims 2 to 4, wherein the signal contact elements (42) are spaced apart from an edge of a cut-out section (60) or throughhole, respectively.
6. The connector shell according to any one of claims 1 to 5, wherein the longitudinal array (44) of the contact elements (46) comprises at least one row of grounding contact elements (40) and at least one row of signal contact elements (42), the rows of grounding and signal contact elements (40,42) being arranged adjacent to each other.
7. The connector shell according to claim 6, wherein one of the signal contact element rows or the at least one signal contact element row is arranged opposite to the grounded longitudinal edge (28) of the grounding plate (24) and wherein the grounding plate (24) comprises a cut-out section (60) having extending therethrough the signal contact elements (42) of the signal contact element row opposite to the grounded lateral edge (28) extend.
8. The connector shell according to claim 5 or 6, wherein the contact element array (44) comprises two grounding contact element rows and two signal contact element rows, the two signal contact element rows being arranged adjacent to each other and between the two grounding contact

element rows, and wherein the grounding plate (24) comprises several cut-out portions through which at least one signal contact element (42) extends.

9. The connector shell according to claim 8, wherein the grounding plate (24) comprises a frame defining the longitudinal edges (28) and transverse edges (30) surrounding a cut-out section (60) having the signal contact elements (42) extending therethrough.
10. The connector shell according to any one of claims 1 to 9, wherein the grounding contact elements (40) are frictionally received in the respective throughholes (62) of the grounding plate (24) for making mechanical and electrical contact with the grounding plate (24) within the respective throughholes (62).
11. The connector shell according to any one of claims 1 to 10, wherein at least the grounding contact elements (40) comprise grounding pins (48).
12. The connector shell according to claim 11, wherein the grounding pins (48) are designed as compliant pins.
13. The connector shell according to any one of claims 1 to 12, wherein the grounding plate (24) comprises an electrically conductive layer.
14. The connector shell according to claim 13, wherein the electrically conductive layer extends into the throughholes (62) receiving the grounding pins (48).
15. The connector shell according to claim 13 or 14, wherein the grounding plate (24) is made from electrically conductive material, in particular metallic material.

16. The connector shell according to any one of claims 1 to 15, wherein the housing (18) comprises a first half (20) and a second half (22), at least the first housing half (20) comprising an electrically conductive material, and wherein the grounding plate (24) along its grounded longitudinal edge (28) mechanically and electrically contacts the first half (20).
17. The connector shell according to any one of claims 1 to 16, further comprising a socket connector (26) having a plurality of contact elements (46) wherein each contact element (46) comprises a contact pin (48) and a socket (52) for receiving a contact pin of a mating connector.
18. The connector shell according to any one of claims 1 to 17, wherein the individual cables (16) of the multiple wire cable assembly comprise coaxial cables or twinaxial cables.
19. The connector shell according to any one of claims 1 to 18, wherein the contact elements are provided for receiving terminal connectors having (1) a housing of electrically conductive material, at least one signal contact element arranged within the housing and electrically insulated relatively to the housing and electrically connected to a signal element of the array of contact elements and (2) at least one ground contact element arranged within the housing as well as electrically connected thereto and electrically insulated relatively to the signal contact element of the housing and electrically connected to a grounding contact element of the array of contact elements.